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SURGICAL TREATMENT OF GLAUCOMA.

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BOTH acute and chronic glaucoma, everywhere prior to the discovery of Von Graefe, and here almost to the present time, have been in the main regarded as incurable, although in some cases of acute glaucoma a slight improvement of vision has been attained by treatment, and recurrent inflammation, with the deterioration of vision incident to it, probably retarded or prevented by energetic antiphlogistic or alterative measures, combined with a judicious and carefully observed ocular regimen. For these hitherto hopeless diseases, Dr. Von Graefe some nine years ago resorted to the operation of iridectomy, or excision of a portion of the iris. Of the effectiveness and utility of this operation in acute glaucoma, the editor of the *British Medical Journal* writes emphatically as follows:—

“It has been largely practised, and by those who have avowedly abstained from trying it, energetic attempts have been made to detract from its merits. The great facts, however, remain, that acute glaucoma does not unfrequently occur, that it is irremediable by constitutional treatment, and that the excision of a portion of the iris, if performed within a few days of the outbreak, is effectual in restoring vision and putting an end to the disease. To the first two of these propositions, all experience bears testimony. Respecting the third, it is no longer possible to be incredulous. Indeed the facts are now before us, and we may judge for ourselves. Cases are now on record, which, if clinical evidence can be allowed the slightest weight, prove that this operation, whatever may be the true theory of its action, possesses a really marvellous power in controlling the progress of certain morbid changes otherwise destined to result in permanent blindness. If we may trust these facts, Von Graefe's discovery ranks second only in ophthalmic beneficence to that of the operation for cataract.”

In corroboration of these remarks, during the past three years

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European medical literature, both in England and on the Continent, has given us the strongest and most convincing testimony in various forms, in the details of cases and in speculations as to the rationale of their cure.* On the other hand, by a few Continental, but by more English writers, or surgeons, the treatment of glaucoma by iridectomy has been questioned, objected to, and ridiculed, and its originator compared with Hahnemann, Priessnitz and De Loeuw, while again others have either modified the operation of iridectomy† or devised another operation for the relief of glaucoma differing from the iridectomy of Von Graefe, and believed by them to fulfil all that is accomplished by it, while at last the eye is left more nearly in its normal, original condition.‡ The old and for many years obsolete and almost disused operation of paracentesis, either through the cornea or sclerotic, has also been revived and advocated as a rival and substitute for the more complex and difficult operation of iridectomy.§

It is quite possible, that each of these different operations may have its own legitimate sphere, to be hereafter settled and defined, and it is also possible that in some cases of glaucoma either of them, carefully and often enough performed, would accomplish a cure; but at present, both in division of the ciliary muscle and in paracentesis, so little has been done and reported, and anatomical investigations of the pathological condition of the ciliary system are so contradictory,|| that these methods are to be looked upon rather as suggestions than as accredited and accepted means of treatment.

To attempt to adjust these conflicting views and rival claims, and to say conclusively whether by excision of a portion of the iris, by division of the ciliary muscle,¶ or by free and repeated paracentesis, relief is most effectively given to the intraocular pressure, upon which the disastrous consequences of glaucomatous disease seems chiefly to depend, would be hasty and presumptuous, even in Europe, where, as regards the operation of iridectomy, a large field of observation is open, and where also some successes are stated to have been attained by division of the ciliary muscle and by paracentesis.

But it is not premature, nor is it in fact early enough to ask the attention of the medical profession in this country to the already proved and established operation of iridectomy for glaucoma.

In the northern portions of this Union, while as compared with other portions of the globe in the same latitudes, the climate presents to the eye an unusual stimulus, the educational and industrial

* They may be found in the Ophthalmic Hospital Reports and Journal of the Royal London Ophthalmic Hospital, the Medical Times and Gazette, the Lancet, Archiv fur Ophthalmologie, Annales d'Oculistique, Omadei Annali, and are on the authority of some of the most accurate and accomplished ophthalmologists of Europe—Bowman, Critchett, Donders, Arlt, Weber, Quaglino, &c.

† Mr. Henry Greenway, who has contrived for excision of the iris an ingenious instrument called the guillotine, and described in Braitwaite's Retrospect, Part xliii., p. 182.

‡ Messrs. Nunneley and Hancock, in England, who divide the ciliary muscle, and whose recorded successes have been confirmed by Desmarres at Paris.

§ By Middlemore and Desmarres.

|| In microscopical examination of glaucomatous eyes, Mr. Hancock finds the ciliary muscle hypertrophied, and Mr. Hulke finds it atrophied.

¶ Entitled by Mr. J. V. Solomon "Intraocular Myotomy."

pursuits and habits of the people tend very obviously and necessarily to fatigue it. While, therefore, the plenty, intelligence, good habits and general well-being of the poorer classes render disease of the eyes on the whole less prevalent and the field of ophthalmic practice less extensive than in most parts of Europe, diseases of the internal textures of the eye are met with in a larger ratio to the whole amount of disease of the eye, in this, than any other country. Among the various diseases incident to the internal textures of the eye, none are more grave and alarming than glaucoma.

While for some years past a very frequent if not general adoption of the operation of iridectomy for glaucoma has been accomplished in Europe through the writings and efforts of Von Graefe and others; on this side of the Atlantic it has been, until very recently, altogether ignored or neglected, and very many persons whose vision might unquestionably have been preserved or restored, have been suffered to lapse into total, irremediable blindness. We are now almost destitute of, and but just commencing, an experimental, practical acquaintance which should have dated some years earlier, with a surgical question worthy of engaging the best skill and intelligence of the profession.* To general practitioners the operation is one of greater importance, if not of greater interest, than to oculists, for a full and complete restoration of vision is to be expected from iridectomy only during the first access of the glaucomatous symptoms. If blindness has continued for two or three days, the chances of a full restoration of vision rapidly diminish. Indeed, the operation is more largely available in its preventive than its curative influences on the loss of vision, and it seems to be generally agreed by those gentlemen who are most familiar with it, that it is desirable to make the excision while the blindness is impending, rather than at any time after it is accomplished; that is to say, before the intraocular pressure which tends to paralyze the retina and optic nerve has actually paralyzed them. To wait, therefore, for counsel or assistance in a case of acute glaucoma, must be in many instances equivalent to an abandonment of the patient to inevitable blindness, and it is the duty of every practitioner who is not favorably situated for consultation, to inform and prepare himself for the operation of iridectomy in glaucoma, just as he does any other surgical operation that admits of no delay; as he would for abstraction of blood in cerebral congestion, or for the tying of a cut artery.

The apparent apathy and indifference of the profession on this subject can hardly be accounted for otherwise than from some misapprehension either as to the usefulness and availability of the operation, or the difficulties of diagnosing the disease or executing the operation.

That the importance and usefulness of iridectomy in glaucoma

* At the time of writing this communication, the two operations reported by me in the *Journal* of March 13th were the only operations of iridectomy for glaucoma which had been performed, or rather reported. To these has been added a third very successful one, reported by a gentleman of this city in the *Journal* of May 8th.

have not earlier been admitted among us, is certainly remarkable, but it is a fact for which, in part at least, our medical periodical press is responsible, having failed to do its duty in presenting this subject fairly and fully to its readers. The silence which has prevailed is culpable; but to have given, in a matter of such moment to the profession and the public, only one side of it, and that the wrong side, is inexcusable. Previous to the two operations performed by me in this city, Jan. 20th, 1862, there was in all of the medical journals of the land but one extended notice of, and that a compilation from various sources upon iridectomy in glaucoma, in which compilation the description of the operation itself and its rationale are summarily despatched in eight lines, while nearly eight pages are devoted to the remarks of opponents and cavillers, showing its unreasonableness and inutility.* This compilation opens with a report from Dr. Bader, of 107 cases operated on within two years at the Royal London Ophthalmic Hospital, which is as minute and circumstantial in its details as could be desired, but upon the whole valueless. In this country, where with peculiar provocations for this and other diseases of the internal textures of the eye, glaucoma is a very rare complaint, the first glance at this report compels the reflection, as has been elsewhere suggested, that either coincident with the early accounts of iridectomy from Germany there was an epidemic glaucoma in England, or else that an immense error in diagnosis was made, and the operation resorted to without proper discrimination. A closer scrutiny of this report also shows conclusively, from the traumatic lesions resulting, that in very many of the cases the operation was ill performed. To this inconsiderate and evidently unfair report, which has already received more attention than it deserves, are appended various excerpts deprecatory of or proposing substitutes for the operation of iridectomy, some of which, from the authority under which they appear, and the reasonable tone of the writers, have a fair claim to be quoted by a leading journal as exponents in part of European opinion, and are certainly entitled to a careful and impartial reading. To the giving of these, of course, no objection can be made, but there is strong reason to complain when, in an ostensible *resumé* of any surgical question worthy to be introduced to the notice of the profession at all, everything tending in favor of it is withheld. That a paper so defective in the conditions of a candid scientific review, could have much influence, is not to be admitted, but that, in the absence of other rebutting testimony, it had some weight, cannot be doubted.

Upon the ground of my own actual experience here, and that of other gentlemen also, and from the accumulated evidence abroad, of a successful application of iridectomy to suitable cases of glaucoma, I give to the general drift and intent of the compilation above referred to, an unqualified contradiction.

* The eight first pages, under the head of "Ophthalmology," in the American Journal of the Medical Sciences, April, 1861, p. 578.

DR. SPOONER ON THE DIFFERENT MODES OF TREATING DISEASE.

[Continued from page 333.]

WITHIN a few days after I read the account in *Braithwaite*, an opportunity occurred in my own family to test the value of this medicine.

CASE I.—Feb. 9th, 1852. My youngest child, a boy nearly 3 years of age, awoke, appearing to be ill. During the day, he was languid, disinclined to play or take food. In the evening he became restless, feverish and indisposed to sleep, which symptoms increased rapidly in severity until convulsions took place, which occurred twice before nine o'clock on the next day. On the return of daylight a distinct efflorescence was seen on the skin, marking the character of the disease. The appearance of my child at this time was truly alarming. He lay utterly unconscious, apparently with entire loss of muscular power; skin moist and burning hot, pulse quicker than I could count, respiration panting. Having lost all confidence in every mode of treating this disease that had been known, and having within a week lost a very interesting child in one of my best families from the same cause, and looking upon my child's case as almost desperate, it seemed to me a fair opportunity of testing the power of the carbonate of ammonia. Before taking a step so important, I sought the advice of my friends and neighbors, Drs. Ware and Holmes, of Milton. They having examined the child, and having expressed an opinion coinciding with my own as to its nature, severity and danger, I directed their attention to the article in *Braithwaite* above quoted. The result of the consultation was, that in view of all the circumstances of the case, it was advisable to use the ammonia, it being the only medicine that offered any hope.

The following form was agreed upon: *R.* Subcarb. ammoniæ, ʒ i.; muc. gum. acaciæ, simpl. syrupi, aa ʒ ijss.; olei sassafras, gtt. ij. *M.* Of this preparation, one teaspoonful was given every three or four hours. For nearly twenty-four hours after commencing the use of the medicine, no perceptible effects from it occurred; once during the night he had a long and severe fit of coughing, after having taken the medicine. On the commencement of the second day of taking it—the third day of sickness—he recognized his mother by returning her kiss, the first evidence of consciousness that he had given since the first convulsion. As the day advanced, his pulse, breathing and skin improved. Indeed, from the morning of this day, there was a rapid improvement, so that by the following Sunday he was down stairs amusing himself. What is equally remarkable, none of the common sequelæ of scarlet fever were to be observed, but he was left as sound in body and mind as he was previous to his sickness. I have seen many severe cases of scarlatina, but I regard this as the most remarkable case of recovery that has come within my knowledge—remarkable in quickness and completeness. Let me give a brief review of the case.

The child began to complain on Sunday morning. During the first twelve hours, his sickness was mild; the next six hours, he grew sick very fast; during the thirty-six hours that followed, dating from the time of the first convulsion, he was utterly apathetic. He was wholly unconscious of anything, and during all these hours it was not known that he moved a voluntary muscle. In whatever position the body was placed, and in whatever position the arms or legs were placed, there they remained until they were moved by his attendant. When taking the medicine, usually there would be some coughing, or choking, as if the throat was irritated by it; his lips were dry and parched, and when water was put into his mouth he would swallow it quickly: but beyond this, during these thirty-six hours, he gave no signs of thirst. At the commencement of the third day of his sickness—the second day of his medicine—he exhibited the first signs of consciousness. On the morning of the fourth day, whilst a professional friend was visiting him, he looked up, and seeing a stranger, with a single effort he leaped to the side opposite to that on which he was lying, showing sufficient energy, both of body and mind, to warrant his recovery. Before the close of the week, he was restored to his usual health.

The work of Dr. Peart, in which this remedy was first noticed, was published in the year 1802—sixty years ago. The question will naturally arise, if the efficacy of ammonia in scarlatina is so remarkable as is represented in this work, why has it not been generally adopted by the profession? It is not possible to give a direct answer to this question; but there are several reasons why the medicine has not become more generally used.

The first reason is to be found in the account by Dr. Peart and others, recommending the use of the ammonia. It is seldom that a medicine comes to us recommended by so good authority as is the subcarbonate of ammonia in scarlatina, without good reason. No doubt this account contains a valuable truth; but, unfortunately, it is extravagant, its statements are unqualified, and it allows no exceptions. During many years of extensive practice among children, we are assured there was no death; in hundreds of consecutive cases, in every *form* and *stage* of the disease, the ammonia was given with uniform success. Thus the account promises too much, more than can be realized. It promises more than can be realized from any known remedy. We have no remedy of which it can be said, it will never fail. Vaccination does not always prevent smallpox; opium does not always relieve pain; mercury does not always cure syphilis; nor does cinchona always cleanse the system of the miasm of intermittents. All that we can say of any medicine is, that it is useful, and the best we have for a specified purpose. If, encouraged by the early accounts of this medicine, a physician should be induced to use it, there is more than an equal chance that he will be disappointed; not, however, from want of power in the medicine, but, as I shall presently show, from a want of knowledge

of the proper way of using it. Thus, as it too often has been, these physicians, in their earnestness to recommend a valuable medicine, did much to prevent a fair trial of it by others.

Another reason is to be found in the qualities of the medicine itself. Ammonia is a difficult medicine to give to children; and often requires much decision on the part of the physician and energy on the part of the nurse to secure for it a fair trial; and when there is ulceration in the throat, it is impossible to give it. This difficulty is a serious obstacle to the use of this remedy, especially in the hands of physicians who are sceptical in regard to the benefit of any medicine in scarlatina.

A third reason is to be found in the different ways of using the ammonia by different physicians. This is the most important reason. Indeed, this is the chief cause of the difference of opinion among physicians in regard to the value of many medicines. Different physicians use the same medicine in different doses; or they give it in *different stages* of the same disease, and very naturally come to different results. The right stage for giving a medicine is a matter of quite as much importance as the size of the dose to be given. It may require many years after a medicine has been brought into notice, before the precise limits of its usefulness can be defined—or the best way as to form and quantity of administering it, or the right stage for giving it, shall be determined. In the mean time, there may be every variety of opinion in the profession as to its usefulness. A striking example of this can be found in the history of cinchona as a remedy.

The bark of cinchona was first brought into notice as a remedy for fever and ague by a physician in 1632. For a series of years it encountered the prejudice of the profession, and, it is said, it would have fallen into oblivion had it not been for the activity of the Spanish Jesuits. Given to the Arch Duke Leopold, of Austria, at the commencement of the cold stage of an intermittent fever, it produced little or no effect, and consequently it was declared to be useless. Given to an alderman of London, and he died while using it, and it was condemned as a dangerous medicine. Oliver Cromwell was sick with fever and ague, and languished and suffered and died from it; and his physician was afraid to use the bark, in consequence of its dangerous effects in similar cases. At length Sydenham, who was at first opposed to its use, candidly watched its effects, became convinced of its power, determined the quantity and frequency of its dose, and that the time of giving it was between the paroxysms, and not during them, as had been the practice.* Thus it appears that a valuable remedy may fail from error in using it. This remark is applicable to the carbonate of ammonia in scarlatina. Physicians have given it without knowing how it should be given, and consequently have often failed to obtain good results from it.

* Good's Study of Medicine, Vol. II., p. 130.

In using the subcarbonate of ammonia, there are three rules to be observed:—

1. Give it as early in the disease as possible.
2. Give it in as large doses as the patient can bear, and repeat it every two, three or four hours, according to urgency of symptoms.
3. Continue it until there is improvement of the symptoms, which can usually be seen on the second or third day.

The first rule is of paramount importance. I am confident that some physicians have failed in the use of ammonia, from not observing this rule. With our present knowledge, we cannot define the limits, as to time, of the usefulness of this medicine. So far as I have observed, its effects have been most striking when given at the very onset of the disease; and in a few cases, when forty-eight hours had elapsed before commencing the use of the medicine, I have seen no benefit from it.

The usual dose of the medicine is from three to five grains given in simple syrup, or in water saturated with sugar. There is a serious difficulty in regard to the dose of this medicine, owing to the great difference in the article itself, as received at different times from the apothecary. When first made, the subcarbonate of ammonia, or, as the chemists call it, the sesqui-carbonate of ammonia, is solid and semi-transparent, giving a strong smell and taste of ammonia. On exposure to the air it effloresces, and is converted into a bicarbonate, losing its ammoniacal smell and taste. In its first state it is too pungent; and if kept too long, it *may lose* its specific power. The article that I have used has had the smell and taste of ammonia, but not so strong as to render it difficult to swallow.

As to the third rule, I have seen decided improvement in little more than twenty-four hours, when less than thirty grains had been given; and I have continued its use until more than two drachms have been taken. Improvement in most cases will take place on the second or third day, when the medicine has been given early on the first day of the attack. In one case, in which the medicine was not commenced until the second day, it was continued through five days, and with decided benefit. At one time I thought that the smell of the ammonia in the urine might be taken as an evidence that it had produced its specific effects upon the system. In several cases this odor has been well marked, and has compared in time to the improvement in the symptoms. But subsequent observations have persuaded me that improvement often takes place without the ammoniacal smell.

It has not been my practice to give the ammonia in cases which at the beginning were mild; although I have sometimes had reason to regret this course, in consequence of these patients having suffered from troublesome sequelæ, which the ammonia would have prevented.

The patients to whom I have given this medicine, have, for the

most part, presented the following symptoms:—Convulsions, or distressing vomiting, with anxiety, prostration of strength and quick pulse. Convulsions almost uniformly usher in cases of a violent character; the other symptoms mentioned are usually precursors of severe cases.

CASE II.—February 18th, 1861. J. T., 8 years.

1st day of disease.—Attacked with severe vomiting and diarrhœa.

2d day.—I saw him for the first time; vomiting has ceased, diarrhœa continues, discharges frequent, liquid and bilious; throat could not be seen; much obstruction in breathing; chest covered with a diffused rash of a deep red color; cheeks of a deep red; mouth surrounded with a purplish white; much restlessness: pulse 140. Directed carbonate of ammonia, \mathfrak{z} i., to be dissolved in twenty teaspoons of simple syrup—one teaspoon every two hours.

3d, 4th and 5th days.—No essential improvement. Nights have been very restless; much delirium night and day; respiration difficult, from obstruction in the throat. Eruption has extended over the whole body, still of a deep red color; whiteness about the mouth continues, also the diarrhœa. The ammonia has been used every two or three hours, to the present time. Continue the same.

6th day.—Much improvement during the night; some quiet sleep; delirium has ceased; the breathing, skin and pulse much improved. From this time the recovery was rapid and complete. No medicine was given but carbonate of ammonia; and of this, more than two drachms were given. Improvement did not take place until the close of the fifth day of taking the medicine, when it was very rapid. Had the medicine been given at the commencement of the disease, an earlier improvement, probably, would have been seen.

CASE III.—March 13th, 1861. S. T., 13 years. 1st day.—Taken with vomiting and diarrhœa, and much prostration; pulse quick. Gave ammonia, as in the last case, at the onset of the disease.

3d day.—Eruption has appeared on the chest—none on the extremities. Symptoms mild.

4th day.—Convalescent. Recovery rapid and complete. This child, in less than four days, took 116 grains of ammonia, and no other medicine.

CASE IV.—G. T., 1 year of age. March 20th, taken with vomiting and diarrhœa. The same medicine was given once in two or three hours when awake, for twenty-four hours. No eruption appeared upon the skin; throat was not examined. She recovered speedily, after one day of serious sickness.

This case so much resembled the preceding cases in the same family at its beginning, that I presumed it to be the same disease, and would take the same course, and treated it accordingly. Whether the medicine cut short the disease or not, I will not presume to say. I state the case as it occurred. She took about sixty grains of ammonia in thirty-six hours, and no other medicine.

In five other cases, in which the disease has commenced with vio-

lent symptoms, the ammonia has been given in the same way, and with the same results. One remarkable effect of this medicine has been, that the patients who have taken it have recovered not only rapidly but completely; that is, with none of the common sequelæ of scarlatina. One exception to this result, to which I will refer, has occurred.

(To be continued.)

Army Medical Intelligence.

REPORT OF SURGEONS SPECIALLY DETAILED FROM BOSTON.

To the Surgeon-General.

BOSTON, MAY, 1862.

DEAR SIR,—We left here, with your instructions, April 10th, 1862, in the afternoon, and proceeded as soon as possible to Fortress Monroe. At this point there was only time for a passing word with Surgeon Cuyler, as he was just starting out on a hospital inspection visit, and circumstances prevented our waiting his return for a more formal report.

By the politeness of Gov. Sprague, of Rhode Island, we were invited to accompany him hence in the transport Steamer specially detailed to carry his Excellency and Staff to Ship Point. From this place we walked to Gen. McClellan's headquarters, a distance of about seven miles, the condition of the road being such that the wagon, drawn by six mules, and containing only our personal baggage, a small valise and blanket for each of us, occupied the whole day in getting up.

After reporting to Surgeon C. S. Tripler, Medical Director Army Potomac, we left, by arrangement, for Gen. Sumner's headquarters, 2d corps d'armée, about 2½ miles distant, and were very kindly and hospitably received by him, and furnished with a room in his house.

The next morning we reported to J. F. Hammond, Surgeon and Medical Director 2d corps d'armée. He received us courteously, fully appreciating our position and object, and gave us the choice of a tent entirely to ourselves, with nothing particular for us to do till a battle commenced, or the organization of a General Hospital in the rebel log cabins, in the woods adjoining the Glenbrook Farm of Dr. Powers, and in the immediate neighborhood of the headquarters 2d corps d'armée.

It was expected that, in case of a battle at Yorktown, we should be in readiness as a reserve corps of surgeons.

Not wishing to remain idle and useless, the sick already in the cabins, numbering about one hundred, and largely composed of soldiers from the Mass. 15th, 19th and 20th regiments and Andrew sharp-shooters, were transferred to our sole charge.

Immediately after the cabins came under our control, it was considered necessary to institute sanitary measures for our village of about two hundred log huts. Accordingly a requisition was made for fifty men to report daily to us for instructions, till further orders, in reference to police duties, at the General Hospital, near Dr. Powers. About seven hundred men were employed by us in collecting and removing the mud, filth and the debris of a badly kept camp, and even then the grounds were not entirely cleaned up at the time of the evacuation of Yorktown. A guard of thirty or forty men also report-

ed to us daily, which, with the police force, was removed when our troops moved forward.

In establishing ourselves in this place, we were met in many instances by evidences of a cordial appreciation of our object and wishes; and, in this connection, among Massachusetts men, acting Ass't Surg. Crehore, Quartermaster Folsom, Commissary Peirson and Lieut. Whittier of the 20th regiment, deserve our warmest thanks for their attention and kindness. Col. Hinks, Surg. Dyer, Ass't Surg. Willard, of the 19th Mass., were also ready in their kind reception of us. It is equally necessary to say that from others we were the recipients of rude incivilities, looked upon unnecessarily with jealous eyes, as intruders and poachers upon preserves to which others held the exclusive right. Some seemed, or pretended to seem, at a loss to know with what object we had come there; others did not hesitate to say that we had no business there, and presented to us a rude and cold shoulder. As a general rule, however, the higher the official the greater the kindness with which we were received, and the greater the endeavor to facilitate our plans. We were greatly indebted to Gen. Sumner and Staff, especially to J. F. Hammond, Surgical and Medical Director of his corps, for numerous sociable civilities and hospitable invitations. Gen. Richardson and his Staff were ever ready and willing to assist us, as also commissaries and quartermasters generally. Division surgeons were also gentlemanly and obliging.

On Friday and Saturday, May 2d and 3d, rumors were more than usually prevalent of an advance movement of the division near us, and the general indications throughout the camp seemed to corroborate them. We took immediate steps to make requisitions sufficient for our own sick, in the way of rations and medicines, and the surgeons who intended to leave patients in our charge were notified by us and by their Division Surgeon, that an adequate provision should be made, under the circumstances, for all their wants.

Unfortunately this duty was omitted by many. The next day, Sunday, the day of the evacuation of Yorktown, and of the general advance of our troops, three hundred additional sick were suddenly brought to us in different squads, many without rations, medicines, cooks, nurses or cooking utensils.

Ass't Surg. Tompkins, — N. Y. regiment, was directed to take charge of a portion of the sick, and performed his duties efficiently.

Not knowing to what extent our number might be still further increased, nor how largely our medicines and rations might be drawn upon, it was judged most prudent to make requisitions large enough to anticipate and cover any emergency or exigency that should come upon us.

It was necessary to get the supplies from Yorktown. The issuing of requisitions and obtaining transportation was at that particular time attended with great difficulty. Ward-master Cook, 20th Mass. Vols., was specially detailed, and spent thirty-six hours uninterrupted labor in the discharge of this duty. Too much praise cannot be given to Assist. Surgeon Greenleaf, of Dr. Tripler's staff, for his active co-operation and willing assistance at this and other times of great embarrassment, when his hands and head were overloaded with pressing and needed requirements. Surgeon Wheaton, of Rhode Island, was also very attentive and kind to us.

For days after the evacuation of Yorktown, straggling sick came to

us and reported that others had been left in the woods and camps, without medical attendance, medicine, or proper and sufficient rations. Immediate orders were given for the ambulance-driver to hunt the camps through, and bring in any sick ones, too feeble to join their regiment. Several were found, and properly cared for. Soon our number of patients swelled to five hundred. Our cook cheerfully performed, to the extent of his power, this crowded and extra duty, with a supply of cooking utensils too scanty even for one hundred persons. Directions were given to the convalescent to cook and help all they could, with their dippers, for the sick of their own wards.

Notwithstanding these many obstacles, the patients, it must be confessed, did extremely well, and the amount of complaint from them was very little. The diseases were principally of a typhoid character, genuine typhoid fever, typhoid pneumonia, dysentery, diarrhœa, acute and chronic rheumatism. The type of all of them may be said to have been generally mild, in spite of the great fatigue, and, to many, exhaustion, from work in the trenches by night and corduroying the roads by day, with other labor incident to military encampments, and frequent exposure to long-continued, cold, north-east rain storms.

Malaria was said to be acting powerfully, and therefore quinine must be administered in large doses. The ill effect from this large dosing was found to be much greater than that from any supposed malarial influence. The improvement in every instance, where the quinine was either entirely stopped or given in greatly reduced quantities, was too marked and too continued to leave a shadow of a doubt as to the exciting cause of the persistent headache and diarrhœa. The good effect of stimulants, brandy or whiskey, was immediately seen, when we had some to give.

The wounded under our charge came mostly from the Andrew sharp-shooters. Considering the locality and depth of some of the wounds, the constitutional disturbance was slight and of short continuance. Some one or more came daily from the company to inquire after the wounded, and to see if they could furnish anything to relieve them, or if an extra nurse was needed. The mortality during our whole service, under the circumstances, may be considered as very small. Much credit is due to the hospital steward, W. W. Warren, 20th Mass. Vols., for his willing labor under all the trials.

Early on the morning of Monday, May 12th, directions came to us to have all our sick, medicines and stores transported to Yorktown. Orders were immediately given to have everything in readiness for instant departure. Seventy-five four-mule army wagons, with a little hay on the floor, were at our disposal, and by one o'clock, P.M., all the sick, baggage and stores of every kind, were in Yorktown. Very considerable apprehension was felt in reference to the effect of a ride of over six miles upon the sickest typhoid and other patients, in a hard wagon, and over a rough corduroy road. It would have surprised no one if some had died on the passage. The order to remove them was a military necessity, and must be obeyed. Nurses were detailed to follow certain wagons and furnish whiskey to the most feeble; and on the arrival of the last wagon in safety, it was found that many of the very sick typhoid patients were sensibly improved by the ride, and the improvement was more manifest the next day. These hard-riding army wagons were immeasurably superior to any one-horse ambulance that we saw for the sick and wounded. The

drivers of these ambulances call them very aptly, "horse-back breakers," and to this it might be added that they are general body shakers and breakers, unless upon a road smooth as a race course.

We reported to Ass't Surg. Greenleaf, at headquarters, and delivered over to his care all the sick, together with the medicines, rations, cooking utensils—in fact, everything belonging to our hospital. The next day, Tuesday, in the afternoon, we went on board the State of Maine, a transport steamer, containing 360 patients, sick and wounded, and arrived in Washington, Wednesday, at noon. Leaving Washington on Thursday, we reached Boston early Saturday morning, May 17th, 1862, after an absence of more than five weeks.

Before closing our report, we feel as if we ought to again bring in prominent notice the help and kindness of Gov. Sprague. From what we afterwards knew and saw, it is almost impossible to say from what vexatious delays and trouble we were saved by his opportune and valuable aid. It has been constantly appreciated and spoken of. Special thanks should be given to Surgs. Tripler, Hammond, Wheaton, and Ass't Surg. Greenleaf, for their uniform politeness and attention to us.

It will be seen from the above, that at times we labored under great difficulties. Many of them were probably unavoidable and incident to war anywhere; but much might be better, if there was a stronger force of officials to carry out many of the details of the work, for the heads of all departments are greatly overtasked.

To an observer of the immense amount of work accomplished by Gen. McClellan, in the space of one month prior to the evacuation of Yorktown—to wit, the digging of deep, wide trenches, miles in length, the formation of breastworks, the planting of batteries, the cutting down of thick forests, and building, corduroying and repairing roads, the twenty-four hours picket duty once in three days, with the accompanying night labor, to say nothing of the interruptions and loss of sleep from night alarms occurring occasionally two or three times in the same night, and exposure to frequent cold, heavy rains, it is only remarkable that there was not more confusion, greater deficiencies, and a much larger sick list and mortality. Whatever the obstacles, natural and other, to Gen. McClellan's preparations and movements, an area of a few miles will have on its surface, deep, lasting lines and monuments of his great energy, perseverance and thoroughness. The patience, cheerfulness and fortitude of the soldiers, their sympathy and ready assistance to each other, present striking evidence of their confidence in their active and self-reliant leader, and certain indications of the success of their arms, to which we are all looking forward.

GEO. H. GAY, M.D.,

C. D. HOMANS, M.D.,

R. M. HODGES, M.D.,

WM. J. DALE, Surg. Gen.] Surgeons specially detailed by His Excellency the Gov. of Mass.

REPORT OF DR. S. CABOT, JR.

BOSTON, MAY 22nd, 1862.

To His Excellency Governor J. A. ANDREW, Commander-in-Chief of the Forces of Massachusetts.

IN accordance with orders from your Excellency received through the Surgeon-General of the State, I, with my assistants Drs. Parks and

Heartwell, left Boston on April 10th for the seat of war before Yorktown, in company with Drs. Gay, Homans, and Hodges, who were detailed by you for similar service.

Aided by the kindness of Governor Sprague, of R. I., we were enabled to reach the headquarters of the Army of the Potomac, April 13th, where we reported to Dr. Tripler, Medical Director of the Army of the Potomac. Drs. Parks, Heartwell, and myself, were retained at headquarters, Dr. Tripler intending to place us in a position where some of the sick and wounded troops of Massachusetts could have the benefit of our care. But owing to inexplicable opposition, it appeared that harm instead of benefit would be the result of this arrangement, and it was therefore given up. We were then requested to organize a Hospital for Regulars in a deserted Rebel Encampment near headquarters, with the understanding that, so soon as our services should be needed by Massachusetts soldiers, we should be at liberty to leave the hospital and hasten at once to the aid of the soldiers of our native State. This plan was carried out, and I think we can truly say that great good was accomplished through our means, and that though we had no peculiar care of Massachusetts troops, still we were able to carry out the spirit of our instructions, by taking care of the sick and wounded from the Regular Army, and by saving lives valuable to the whole country.

After our hospital was established, we averaged about 120 patients, the number being sometimes as high as 146, and sometimes below 100; we discharged about 10 a day on an average. Typhoid fever, dysentery, and diarrhoea, were the principal diseases, which yielded to the effect of rest, shelter, proper food, and a very moderate use of drugs, with great rapidity.

On the day of the battle at Williamsburg, as I was ill with dysentery, I despatched Dr. Parks, at his own request, to the field of action, and remained myself behind at the hospital. Dr. Parks was so fortunate as to afford valuable assistance to Dr. Z. Bliss, one of the surgeons from Michigan, who had established his field hospital in a barn at about a mile and a quarter in the rear of the battle-ground.

The next day I rode up to the battle-ground, saw many of the surgeons, offered my services in any capacity, and having ascertained their most pressing needs, returned to headquarters at Camp Winfield Scott, and communicated with the Medical Officers in reference to their supply. The next morning I despatched Drs. Heartwell and Becker that they might report to Dr. Tripler for service, in answer to a telegraph from the advance, and soon followed them myself to Williamsburg. I took charge of the Seminary Hospital at that place, and remained there until the wounded under my care could be taken down to transports at Queen's Creek, and thence to Fortress Monroe, whither I accompanied them, leaving Dr. Heartwell in charge of the sick, who were to be left at the Seminary until the wounded had been sent to the rear; Dr. Parks being left in a similar position at the hospital for Regulars near Camp Winfield Scott.

Upon my arrival at Fortress Monroe, the wounded were placed in the hands of Dr. Cuyler, the Medical Director of that post, who requested me to take charge of the Steamer Kennebec, aboard of which were about 200 wounded rebels and 25 wounded Union men, to be taken to Washington; I was, of course, most happy to be thus useful, and being ably assisted by Dr. A. Holbrook, of Mass., and some sur-

geons from N. Jersey under the lead of Dr. O'Gorman, of Newark, we were enabled to make the poor fellows tolerably comfortable, and with the exception of one rebel who committed suicide, delivered them safely into the care of Dr. Hammond, Surgeon-General of the U. S. A.

On taking the cars at Washington, I found all of our original party, with the exception of Dr. Heartwell, assembled from their various posts of duty, as it were by accident. I learn from Dr. Parks that Dr. Heartwell is released from his post, and that he is also most probably on his way home, if he has not already arrived there.

I wish here to express my warm appreciation for the valuable aid afforded me by the gentlemen who were assigned me as assistants. During the time while we were present with the army, we took every opportunity to express to the various Brigade and Regimental Surgeons of Massachusetts, our willingness and anxiety to afford them any assistance in our power. Dr. Tripler, at my request, sent circulars to each of the Massachusetts regiments, informing them of our presence with the army, and our desire to be useful to the soldiers of Massachusetts. But we were not called upon for such help, for some reason not clear to any of us.

Very respectfully submitted, by your obed't servant,

S. CABOT, JR.

REPORT OF DR. A. HITCHCOCK.

To the Surgeon-General.

FITCHBURG, MAY 20, 1862.

DEAR SIR,—I seize the earliest moment, since my return, to report to you the character of the duties devolving upon me at the headquarters of the Army of the Potomac, whither I went under your order of the 1st inst. I was at Yorktown on Monday, the 5th inst., and was an attentive listener to the cannonading that day going on at Williamsburg, distant five to ten miles, along the line of battle, which stretched nearly across the peninsula. Some of the time the cannonading was terrific, counting ten to twenty discharges per minute. The distance was too great to hear the musketry; but the fresh orders for "more troops" from Yorktown, and the hurried tramp of thousands of horsemen, the heavy moving of ammunition and baggage trains, and the rapid march of tens of thousands of infantry "onward! onward!!" to the scene of conflict, all indicated the importance of that day's struggle, and was a significant omen to every surgeon to be instantly ready for work. Night passed, rainy, dark and muddy, and morning came, with mist on the river, wreathing the one hundred and forty steamers and transports moored along the shore, in fleecy beauty, while the bright sunshine of a May morning shone over the leafy forests and dense columns of men who were still moving onward by the road, or crowding hurriedly to the boats for river transportation. The cannonading at Williamsburg had now ceased, and early in the day a telegram from Dr. Tripler, at Gen. McClellan's headquarters, called fifteen of the volunteer corps to report at once to him. The Massachusetts and New York surgeons were quickly on the way, and soon had practical knowledge of Virginia mud, and the great tax laid upon human and brute strength to make a hurried journey of only ten or twelve miles. But the mud, swamps, ravines and bogs were at last overcome, and after crossing the battlefield, where some dead still remained unburied, and many wounded were still only partially cared for, in tents or in the bushes, we reached Williamsburg, and immedi-

ately were assigned to duty. The Regimental and Brigade Surgeons were needed to go forward with the army, then in hot pursuit of the rebels, and most of the service, after Tuesday, in Williamsburg, was performed by the Volunteer corps. Drs. S. Cabot and Heartwell, of this State, were already in charge of the Seminary Hospital, and both were highly complimented for fidelity and skill by the venerable Dr. Tripler, of General McClellan's Staff. The New York surgeons took charge of the churches and many private houses now crowded with wounded men. William and Mary's College, the *Alma Mater* of Jefferson, Madison, Randolph, and a host of brilliant men of blessed memory, untainted with treason, now converted into a military hospital, was placed under my charge. The first night it contained 175 patients, mostly wounded by gunshot or shell. During the next six days we received and sent to the boats from this hospital alone a little more than 300 men, leaving only a few "stumps," and a few with mortal wounds, to be cared for by a surgeon detailed, on our leaving, for that purpose. The Government had provided several large steamers, supplied with blankets, mattresses, &c., for the immediate transportation of the wounded to more Northern cities, and most rapidly and successfully within eight days over 2000 wounded men were moved from Williamsburg. Drs. Tripler and Smith, of the Staff, evinced the highest degree of administrative ability in accomplishing this work. Much credit is also due Dr. Bronson, of Attleboro', Mass., who served with me at the College, for his activity in the transportation by ambulance to the boats. I ought also to acknowledge the valuable assistance at the College of three Rebel surgeons, prisoners, who generally were equally attentive and kind to Confederate and Union men.

We had numerous fractures at the College, and I had no hesitation in appropriating the mahogany and white wood of those consecrated halls, to extemporize a "Desault" or "double inclined plane." The right arm of one poor rebel I amputated at the shoulder joint: which, with my subsequent treatment of his case, drew forth from him and some of his comrades the strongest expressions of gratitude and confidence: and nearly the same manifestation of gratitude and kindness was evinced by many others on whom I operated for removing bullets or ligating arteries. It was a great marvel to these poor deluded fellows that a Yankee surgeon could do them a kindness. A Virginia Captain, who had extensive fracture of the right side of the skull by a minié ball, requiring removal of bone $1\frac{1}{2}$ in. wide by 4 in. long, and a considerable portion of cerebral substance, was alive when I left, took food, talked incoherently, and was paralyzed on the left side. He will probably die in a few days. A Georgia Captain received a wound from the fragment of a shell in the right side of the abdomen, just within the crest of the ilium, tearing through the muscles and passing behind the caput coli without entering the peritoneal cavity. The wound was ragged and frightful, and the head of the cæcum constantly protruded at the wound, unless retained by compresses. Pus was discharged abundantly from the deep irregular cavity between the peritoneum and ilium, the pain was slight and constitutional symptoms very mild, the peristaltic motions of the colon were beautifully visible, bowels had moved freely, he had appetite, was hopeful and plucky, and expected to recover and be released and again draw his sword in the Rebel cause. I left him at "William and Mary," and

think that his recovery and fitness for fighting service is about as apocryphal as the future payment of Confederate bonds. All the fractures of the arm and leg that did not require amputation were dressed and sent off on the boats. Several compound fractures of the thigh, either too high up or too much inflamed to justify secondary amputation, were left at the College. The rule has been pretty generally adopted, by Dr. Tripler and his associates, to amputate when the femur has been badly comminuted by a minié ball, and I am quite sure that the primary amputations have been more successful than the secondary.

Without being accurate as to numbers, I may state, as the estimate of the Medical Director, from thirty to forty thigh amputations among the forces engaged at and around Williamsburg. Colonel Tristram Burgess, of Rhode Island, aid to General McClellan, received a ball about the middle of his thigh, which passed upward and lodged on the dorsum ilii, deep under the glutei muscles. The bones were not injured.

Colonel William Dwight, jr., of Springfield, Commander of the New York 70th, received three wounds—one on his head, slight: one in his right thigh, severe flesh wound; and the third entered the left thigh upon the outside, just above and anterior to the trochanter major, crossing under or through Poupart's ligament, and, marvellously avoiding the external iliac and epigastric arteries, came out through the abdominal parietes just over the right internal abdominal ring. The Colonel's regiment fought like veterans. He lost 331 men, killed, wounded and missing, and was himself left for dead on the field. He revived, was taken prisoner by the rebels, and carried to Williamsburg, paroled by them in their flight, and subsequently came under my care, a true soldier and noble man. I had the pleasure of transferring him safely to the care of his friends in Washington, last Thursday. I trust his country will not withhold the gratitude and honor due his valor.

At Fortress Monroe, we had some changes on the Steamer. The number of wounded rebels was increased to nearly 200. The New York surgeons were assigned to another boat, and our valued friend Dr. Cabot came on board and was made Medical Director for the voyage to Washington, whence the prisoners were ordered to be sent by order of the Secretary of War. This order was a disappointment to many of the rebels. The ignorant and dogged grew frantic at the disappointment, as they had hoped to be paroled at once and sent to Richmond. One poor fellow (John Woods, Co. C. 14th Louisiana, Colonel Jones), whose thigh was amputated, and who was suffering under traumatic delirium, swore that "old Abe Lincoln should never hang him," and with terrible imprecations drew a dirk knife and stabbed himself at the epigastrium; before the weapon could be snatched from him, he gave himself a second wound, and continued to curse and swear and died in about an hour. Three others died under my care; one from bullet wound in the spine, one from wound in the chest, and one from inflammation following comminuted fracture of the condyles of the femur. This case ought to have had primary amputation. Three or four others that I left at "William and Mary" were *in articulo mortis*—from cerebral, thoracic and abdominal wounds. On arriving at Washington, I am sorry to add that many of the wounds, especially of those patients on the lower deck, had taken

on an erysipematous character. I have no doubt it was wholly owing to the defective ventilation and crowded state of the ship. Their speedy removal was at once provided for.

Excuse the haste and meagreness of this report,

While I remain, very respectfully, your obed't serv't,

ALFRED HITCHCOCK.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MAY 29, 1862.

We mentioned in our last week's issue that Drs. Cabot, Gay, Hodges, Homans, Parks, and Heartwell, had returned from their important duties in the Army of the Potomac, whither they had been detailed by the Surgeon-General on the special order of the Governor. They have made their reports (which we publish) to the Surgeon-General, and by the order of His Excellency they have been relieved from their detail with a most grateful and complimentary expression of thanks upon the part of the Executive for the very able, discreet, and humane performance of their arduous and delicate duties. Their report is most able, and will be read with interest by the profession.

Dr. Hitchcock, who represented the Executive Council, has also returned, and we publish his interesting experience.

Drs. J. R. Bronson, of Attleboro', A. B. Hall, Mighill, J. G. Wilbur, H. H. Page, and Becker, are with the Army of the Potomac, specially detailed and rendering the most valuable service; and, in addition, twenty-four professional gentlemen, from different parts of the State, detailed by the Surgeon-General, left this city on Thursday last, fully equipped for their arduous labors.

THE late Dr. John Ball Brown, whose death has already been briefly announced, was born October 20th, 1784. He was the son of Dr. Jabez Brown, of Wilmington, Mass., who had a very extensive practice in that and the neighboring towns, and who continued in practice 67 years, dying at the advanced age of 88. His mother was a Dexter, of the same family as the Hon. Franklin Dexter, and Dr. Aaron Dexter who was the first Professor of Chemistry in the Medical College of Cambridge, Dr. John Warren being at the same time Professor of Anatomy. This was before any bridge connected Boston with Cambridge, and the two professors were in the habit of rowing across to deliver their lectures daily.

Dr. John B. Brown was graduated at Brown University, Providence, R. I., in 1806. He studied Medicine with Dr. Augustus Holyoke, in Salem, Mass., until the latter relinquished practice, and finished his medical studies with Dr. Moses Little, who had an extensive practice in that city. Dr. Little being obliged to give up business for some months on account of ill health, it devolved upon Dr. Brown, while yet a student.

After taking his medical degree, he removed to Dorchester, Mass., in 1809, where he soon had a large practice. Typhoid fever prevailed during the autumn of this year, and at nearly the same time he had sixteen cases of this disease under his care. He removed to

Boston in 1810, and it may not be out of place to mention that during the first year after his settlement in this city he was called upon to perform a capital surgical operation in the family of one of its most influential men. In 1814, Dr. Brown married the third daughter of Dr. John Warren. In the following year, Dr. Brown was appointed surgeon and physician of the Boston Alms-house, which was at that time the only Hospital in the city or State; and it is an interesting circumstance to note that although one year was the period limited by the rules of the institution as the term of service of the attending physician, this rule was suspended at the expiration of the year, and Dr. Brown was appointed for another term, and besides his salary an additional sum was voted him.

At this period Dr. Brown had a large number of pupils, some of whom afterwards became distinguished in their profession; among whom may be mentioned Dr. Charles A. Cheever, of Portsmouth.

When the Massachusetts General Hospital was built and organized, Dr. J. C. Warren was appointed surgeon, and Dr. Brown associate surgeon at this institution, and when he resigned this office he was appointed consulting surgeon, which office he retained for many years.

In 1838, Dr. Brown devoted much attention to the study and treatment of what is now termed Orthopedic surgery. He gave earnest attention to the pathological conditions and to the cure of disease and curvature of the spine, and treated several cases during the year. At this period the operation for the subcutaneous division of tendons was unknown in New England, or at least had never been performed here.

On the 21st of February, 1839, he performed the first operation for the cure of talipes by the subcutaneous section of the contracted tendons. The patient was from Milton, Mass., and Dr. Jonathan Ware, of that town, published an account of the case with the result, which exceeded, as he stated, his "most sanguine expectations." This was the first case of clubfoot successfully treated, so far as is known, in New England. From this period Dr. Brown's reputation in this branch of surgery, which includes every variety of distortion of the neck, spine, and limbs, has widely spread, and patients not only from various of the neighboring States and from the south, but from the far west and even from the Sandwich Islands, have journeyed to Boston for the sole purpose of being placed under his care. The institution of this class of cases as a specialty, or, in other words, combining them for the convenience of a more thorough and scientific treatment, originated in this country with Dr. Brown.

The following anecdote, narrated to us by a distinguished contemporary of Dr. Brown, carries us back to an early period of his life, and thus introduces his master, the venerable Dr. Holyoke:—

"When Dr. Holyoke had nearly reached his hundredth birthday, the Massachusetts Medical Society, of which he was the first president, voted to invite him to meet it in Salem on that day and dine with it. Dr. Brown and myself were appointed a committee to wait on Dr. Holyoke and carry to him its invitation. This we did. We found this venerated patriarch of the profession in his study, reading. We were received with a courtesy and kindness which make such official visits especially pleasant. We asked what work it was which was lying open upon his table, and which he ceased to read when we entered his room. He said it was a volume of the Transactions of the Royal Philosophical Society of London. Upon our congratulating

him that he still found interest in such somewhat dry reading, he said it was always agreeable to him, and for a reason he would give us. His memory had so entirely failed him, that what he read one day was perfectly new the next; this was as true of books of entertainment, he added—Scott's novels, for instance—as of works of a totally different class. The purpose of our meeting was made known, and the invitation of the Society very cordially accepted. This visit is remembered. It had much for memory. Here was the master, of a hundred, and there the pupil in the vigor and health of hardly middle life. Extremes were meeting, and were made more striking, more eloquent, than had there been less distance between them."

"Dr. Brown had amassed a large store of practical knowledge, which he was always happy to impart. He was endowed by nature with a cheerful temper, and the weight of years had not repressed it. He was a man of warm sympathies, and the commerce of the world had not chilled them :

'The general favorite, as the general friend.'

"After a well spent life, greatly protracted, exempted from 'the cold gradations of decay,' surrounded by the children whom he loved, and sustained by a Christian hope, he has gone to his rest."

An Army Medical Board meets at Washington on the 2d of June next, for the examination of applicants for admission into the medical corps of the army. Applications must be addressed to the Secretary of War, through the Surgeon-General.

St. Mary's Hospital has been lately opened in San Francisco, by the Sisters of Mercy. The building is 75 by 100 feet, is four stories high, and is divided into twelve large and commodious general wards, and a like number of smaller ones. It is to be under the professional charge of Dr. Lee, as President, and Drs. Bowie, Tolland and Whitney as visiting physicians and surgeons.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, MAY 24TH, 1862.

DEATHS.

	Males.	Females.	Total.
Deaths during the week,	42	36	78
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	33.2	35.9	68.1
Average corrected to increased population,	75.61
Deaths of persons above 90,

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Varicella.	Dysentery.	Typ. Fev.	Diphtheria.
17	1	1	2	5	1	0	3	0

METEOROLOGY.

From Observations taken at the Observatory of Harvard College—For the week ending May 10th.

Mean height of Barometer,	29.732	Highest point of Thermometer,	75.0
Highest point of Barometer,	29.964	Lowest point of Thermometer,	34.0
Lowest point of Barometer,	29.500	General direction of Wind,	W.N.W.
Mean Temperature,	54.6	Am't of Rain (inches),	0.00

DEATHS IN BOSTON for the week ending Saturday noon, May 24th, 78. Males, 42—Females, 36.—Anæmia, 1—apoplexy, 2—congestion of the brain, 1—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 2—cholera infantum, 1—consumption, 17—croup, 1—cyanosis, 1—diarrhoea, 2—dropsy of the brain, 2—drowned, 1—dysentery, 1—scarlet fever, 2—typhoid fever, 3—gastritis, 1—disease of the heart, 2—homicide, 1—infantile disease, 3—interperence, 2—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 5—measles, 3—menorrhagia, 1—old age, 2—paralysis, 3—pleurisy, 1—poly-sarcia, 1—puerperal disease, 1—smallpox, 1—teething, 1—tumor, 1—ulcer (of the bowels), 1—unknown, 6.—Under 5 years of age, 25—between 5 and 20 years, 8—between 20 and 40 years, 19—between 40 and 60 years, 11—above 60 years, 16. Born in the United States, 48—Ireland, 19—other places, 11.